

Detailed technical data

Features

Sensor principle	Photoelectric proximity sensor
Detection principle	Background suppression
Dimensions (W x H x D)	7.7 mm x 21.8 mm x 13.5 mm
Housing design (light emission)	Rectangular
Sensing range max. ¹⁾	4 mm ... 40 mm
Sensing range ¹⁾	4 mm ... 32 mm
Background suppression typ. from	55 mm
Type of light	Visible blue light
Light source ²⁾	LED
Wave length	445 nm
Adjustment	None
Special feature	With blue light LED for detection of highly light-absorbing objects

¹⁾ Object with 90 % reflectance (referred to standard white, DIN 5033)

²⁾ Average service life: 100,000 h at $T_U = +25 \text{ }^\circ\text{C}$.

Mechanics/electronics

Supply voltage ¹⁾	10 V DC ... 30 V DC
Ripple ²⁾	$\leq 5 V_{pp}$
Power consumption ³⁾	$\leq 20 \text{ mA}$
Output type	NPN / PNP (depending on type)
Switching mode	Light switching
Output current I_{max}	$< 50 \text{ mA}$
Response time ⁴⁾	$< 0.4 \text{ ms}$
Switching frequency ⁵⁾	1,200 Hz
Connection type	Cable, 2 m ⁶⁾ Cable with male connector, M8, 200 mm ⁶⁾ (depending on type)
Circuit protection	A ⁷⁾ B ⁸⁾ D ⁹⁾
Housing material	ABS/PC
Optics material	Plastic, PMMA
Enclosure rating	IP 67
Ambient operating temperature	$-25 \text{ }^\circ\text{C} \dots +50 \text{ }^\circ\text{C}$
Ambient storage temperature	$-40 \text{ }^\circ\text{C} \dots +75 \text{ }^\circ\text{C}$

¹⁾ Limit values.

²⁾ May not exceed or fall below U_V tolerances.

³⁾ Without load.

⁴⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ Do not bend below $0 \text{ }^\circ\text{C}$.

⁷⁾ A = V_S connections reverse-polarity protected.

⁸⁾ B = output reverse-polarity protected.

⁹⁾ D = outputs overcurrent and short-circuit protected.

Ordering information

Other models available at www.mysick.com/en/W2S-2

WTB2S-2 Blue, fix

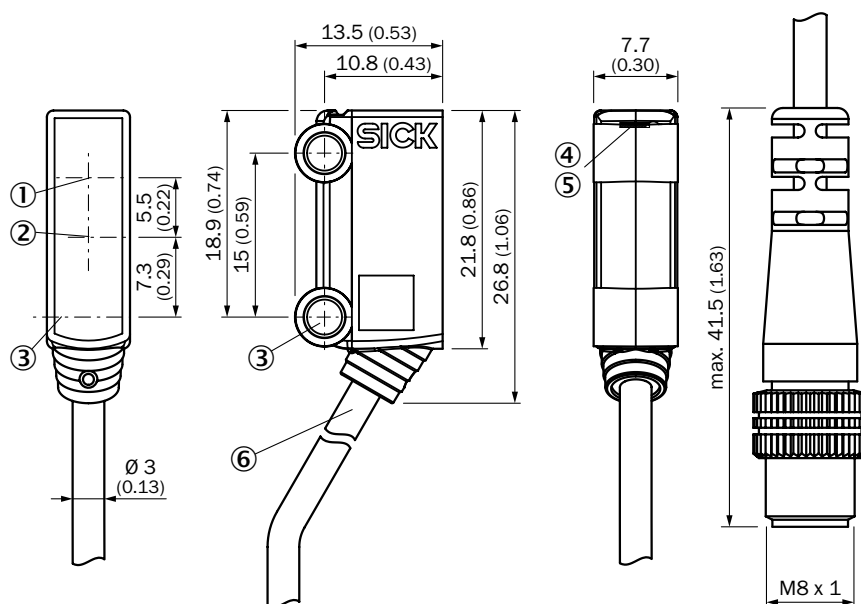
- **Detection principle:** Background suppression
- **Switching mode:** Light switching
- **Adjustment:** none

Sensing range max. ¹⁾	Output type	Connection	Connection diagram	Type	Part no.
4 mm ... 40 mm	NPN	Cable, 3-wire, 2 m, PVC	Cd-044	WTB2S-2N1380	1072490
	PNP	Cable with connector M8, 3-pin, 200 mm, PVC	Cd-045	WTB2S-2P3180	1072489

¹⁾ Object with 90 % reflectance (referred to standard white, DIN 5033)

Dimensional drawing (Dimensions in mm (inch))

WTB2S-2, 18 mm, 36 mm, WTV2S-2

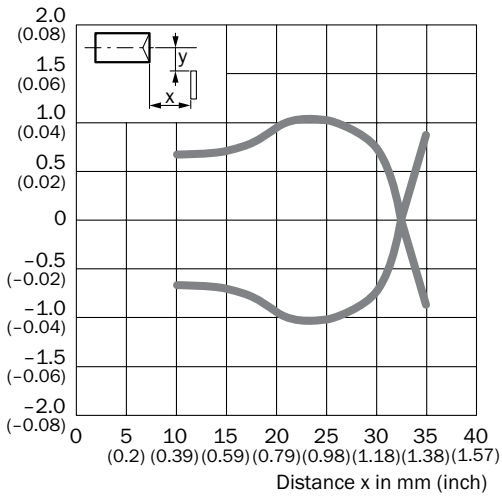


- ① Optical axis receiver
- ② Optical axis sender
- ③ Mounting hole, \varnothing 3.2 mm
- ④ Status indicator LED green: supply voltage on
- ⑤ Status indicator LED, yellow: Status of received light beam
- ⑥ Connection

Characteristic curve

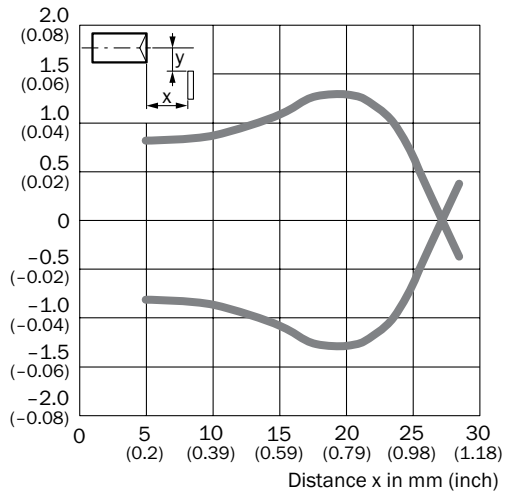
Response curve

Parallel operating range y in mm (inch), 90 % remission



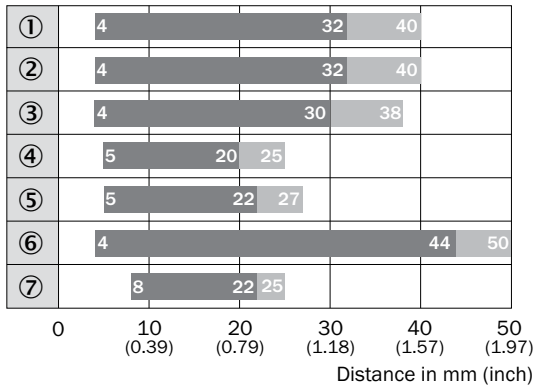
Response curve

Parallel operating range y in mm (inch), 6 % remission



Bar diagrams

WTB2S-2, 35 mm

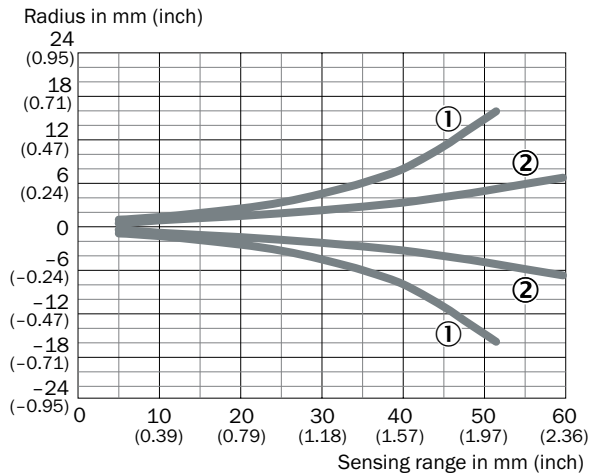


■ Sensing range ■ Sensing range max.

- ① Sensing range on white, 90% remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on black, 6% remission
- ④ Sensing range on ultra black, 1% remission
- ⑤ Sensing range on blue solar wafer with anti-reflection layer, approx. 1 % remission
- ⑥ Sensing range on metallic, smooth surface
- ⑦ Sensing range on transparent, flat objects such as display without close up background

Light spot size

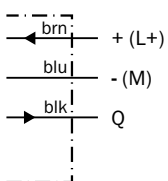
WTB2S-2, 35 mm



- ① Vertical
- ② Horizontal

Connection diagram

Cd-044



Cd-045

